United Nations E/CN.17/2000/13

Economic and Social Council

Distr.: General
14 March 2000

Original: English

Commission on Sustainable Development
Eighth session
24 April-5 May 2000

Progress made in providing safe water supply and sanitation for all during the 1990s

Report of the Secretary-General

Contents

		Paragraphs	Page
I.	Introduction	1–5	3
II.	Overview of the current situation	6–55	3
A.	Methodological considerations	6–14	3
1.	Data collection	8–9	4
2.	Definitions of access	10–11	4
3.	Data analysis	12–14	6
B.	Service coverage in numbers	15–44	7
1.	Global and regional water supply	17–21	7
2.	Global and regional sanitation	22–25	9
3.	Urban scenario	26–34	9
4.	Rural scenario	35–43	10
5.	Water supply, environmental sanitation and displaced people due to civil strife and natural disasters	44	11
C.	Reliability of services and water quality	45–47	12
D.	Flow of financial resources	48–52	12
E.	Environmental sanitation and health	53–54	13
F.	Poverty, water supply and sanitation	55	13

00-34773 (E) 120400

III. Policy trends since the inception of the decade ... 56–68 13
A. Decentralization of governmental functions and role of the private sector ... 57–59 14
B. Empowerment of local communities ... 60 14
C. Importance of the gender dimension ... 61 14
D. Capacity-building and improvement of operation and maintenance ... 62–64 15
E. Drive towards an integrated approach to water resources management ... 65 15
F. Economic and financial dimension of water supply and sanitation ... 66–68 16
IV. Outlook for the year 2025 ... 69–74 16
A. Daunting urban challenge ... 70–72 16
B. Consequences of neglecting the rural poor ... 73–74 17
V. Path to full coverage ... 75–98 17
A. Policy commitment ... 81–83 19
1. Water supply and sanitation as an integral part of poverty alleviation programmes ... 81–82 19
2. Water supply and sanitation as an integral part of human settlement programmes, particularly with respect to the provision of suitable sanitation facilities to the urban and rural poor ... 83 19
B. Sustainability and the implementation of services ... 84–91 19
1. Improved service delivery, operation and maintenance, reliability of services and water quality ... 84–86 19
2. Massive infusion of financial resources coupled with effective cost recovery policies ... 87–88 19
3. Decentralization and devolution of responsibilities to the lowest appropriate level of management ... 89–91 20
C. Key strategies for enhancing implementation ... 92–98 20
1. Integration of water supply and sanitation with hygiene education ... 92–93 20
2. Gender dimension of water supply and environmental sanitation ... 94–95 21
3. Improved information management ... 96–97 21
4. Integration of water supply and sanitation within a holistic approach to water resources development, management and utilization ... 98 21

I. Introduction

1. In 1975, the World Health Organization (WHO) estimated that approximately 77 per cent of the urban population in developing countries had access to water supply either through in-house or through reasonable access to public standposts (see E/CONF.70/14). Approximately 75 per cent of the urban population had access to reasonable sanitation facilities, either by connection to public sewers or through household systems. The World Health Organization also estimated that 78 per cent of the rural population lacked access to safe water supply and 85 per cent lacked satisfactory sanitation facilities. Hence, at the time of the United Nations Water Conference (Mar del Plata, 14-25 March 1977), some 1.9 billion people lacked access to safe water and some 2 billion lacked adequate sanitation.

2. Concerned by this situation, the General Assembly, in its resolution 35/18 and as recommended in the Mar del Plata Action Plan,[1] proclaimed the period 1981-1990 as the International Drinking Water Supply and Sanitation Decade, during which Member States would assume a commitment to bring about substantial improvement in the standards and levels of drinking water supply and sanitation by the year 1990.

3. The General Assembly has conducted periodic monitoring of progress in providing access to the vast number of people without safe water and suitable sanitation throughout the 1980s and 1990s, which has shown that major changes in approaches to the provision of services have taken place. These changes have brought about a heightened awareness of the severity of the problem and innovative solutions to the provision of basic services but have not necessarily increased the pace of progress.

4. The reports prepared by the Secretary-General have consistently expressed the view that in spite of efforts to accelerate the rate of progress in the provision of services, little if any progress is being made in reducing the number of people lacking access to safe water supply and suitable sanitation facilities. In particular, they have sounded a note of alarm concerning the lack of progress in the provision of sanitation facilities. In its resolution 50/126, the General Assembly expressed deep concern that the current rate of progress in the provision of drinking water would be insufficient to satisfy the needs of a very large number of people by the year 2000, and that the lack of progress in the provision of basic sanitation services was likely to have dramatic environmental and health consequences in the near future.

5. The present report has been prepared pursuant to resolution 50/126 of the General Assembly. It endeavours to assess the current situation based on information provided jointly by the WHO/United Nations Children's Fund (UNICEF) joint monitoring programme. In view of the results, the report calls for a renewed commitment at the start of the new millennium to bring to an end the human misery associated with the lack of access to basic water supply and sanitation. It calls for action on a broad front, starting with an assessment or update by Governments of their current situation, based on reliable data and on the establishment of time-bound ambitious but realistic targets.

II. Overview of the current situation

A. Methodological considerations

6. Monitoring access to drinking water and sanitary excreta disposal facilities poses major methodological problems. A review of water and sanitation data from the 1980s and the early 1990s shows that the definition of safe water and sanitary disposal often differs not only from one country to another but also within a country. Furthermore, previous data were based on estimates by providers of the numbers of people served rather than the responses of consumers to household surveys. Indeed, through their rapid and often implausible change in levels of coverage from one point in time to a subsequent one, the data show that estimates of coverage within a country, irrespective of the collection method used, are often unreliable.

7. The present assessment of global coverage marks a shift from provider-based to consumer-based information, which aims to take more accurate account of actual use of facilities and initiatives taken by individuals and communities to improve facilities. Not only can these use patterns and initiatives differ from nationally compiled statistics, but experience shows that provider-based information often ignores post-installation breakdowns and service deficiencies.

I. Data collection

8. The assessment was carried out under the joint auspices of WHO and UNICEF, with financial support from the United Kingdom's Department for International Development and technical support from the Water and Environmental Health in London and Loughborough programme, a resource centre of the Department. Initially, a questionnaire was distributed to all WHO country representatives, with detailed instructions for the process by which it was to be completed. WHO staff (or, where appropriate, consultants or government officers) were to liaise with the local UNICEF country office and with the various national agencies involved in the provision of water and sanitation services.

9. Those completing the questionnaire were first to compile an inventory of existing sources of population-based data on access to water supply and sanitation, particularly national census reports, demographic and health surveys (DHS), and the multi indicator cluster surveys (MICS) carried out with support from UNICEF. DHS and MICS are sample surveys, covering several thousand households in each country; the samples are stratified to ensure that they are representative of the urban and the rural areas of each country. The coverage figures returned by each country with the endorsement of government officials were to be based as far as judged appropriate on the estimates arising from such surveys. It has to be stressed that this methodology alone is no guarantee of accuracy since independent quality control was not carried out and the robustness of the method and the data will have to be verified over time. Therefore, like any other socio-economic data, the data must be assigned statistical confidence limits on the basis of sampling errors, and this should be borne in mind when interpreting and analysing the data presented in tables 1 and 2.

2. Definitions of access

10. The assessment attempted to define access to water supply and sanitation in terms of the types of technology and levels of service afforded. For water, this included house connections, public standpipes, boreholes with handpumps, protected dug wells, protected springs and rainwater collection; allowance was also made for other technologies, as locally defined. Reasonable access was broadly defined as the availability of at least 20 litres per person per day from a source located within 1 kilometre of the user's dwelling. However, it should be noted that even this broad definition is difficult to apply rigorously in the field, particularly in poor rural and peri-urban communities, where daily quantities used and distances to the source are difficult to measure. Types of source which did not give reasonable and ready access to water for domestic hygiene purposes, such as tanker trucks and bottled water, were not included. Sanitation was defined to include connection to a sewer or septic system, pour-flush latrine, simple pit or ventilated improved pit latrine, with allowance again for acceptable local technologies. The excreta disposal system was considered adequate if it was private or shared (but not public) and hygienically separated human excreta from human contact. The types of sanitation that were not considered safe were bucket latrine, overhang latrine, open latrine, uncovered pit latrine or open field, "bush" sanitation.

11. Reasonable access to water and sanitation, as defined above, does not imply that the level of service or quality of water is "adequate" or "safe". No discounting of coverage figures was made to allow for intermittence or poor quality of the water supplies, although the instructions suggested that piped systems should not be considered as "functioning" if they were not operating at over 50 per cent capacity on a daily basis, and that hand pumps should not be considered if they were not operating for at least 70 per cent of the time. Efforts were made to impose these definitions as consistently as possible in the figures presented here. However, there were tendencies in some regions, where higher levels of service are more prevalent, to set stricter requirements for access in comparison to others, and these tendencies may nevertheless have been reflected to some degree in the data.

Table 4
Water supply and sanitation coverage by region, 1990-2000
(Population in millions)

Region/sector	1990				2000			
	Population	*Number served*	*Percentage coverage*	*Number unserved*	*Population*	*Number served*	*Percentage coverage*	*Number unserved*
Africa								
Urban water supply	197	168	85.0	30	297	253	85.1	44
Rural water supply	418	154	36.8	264	487	223	45.7	264
Total water supply	615	321	52.3	293	784	476	60.7	309
Urban sanitation	197	164	83.1	33	297	249	83.8	48
Rural sanitation	418	185	44.4	232	487	210	43.0	278
Total sanitation	615	349	56.8	266	784	459	58.5	326
Asia								
Urban water supply	1 029	971	94.3	59	1 352	1 254	92.7	98
Rural water supply	2 151	1 410	65.5	742	2 331	1 734	74.4	597
Total water supply	3 181	2 380	74.8	800	3 683	2 988	81.1	695
Urban sanitation	1 029	678	65.9	351	1 352	1 047	77.3	305
Rural sanitation	2 151	481	22.4	1 670	2 331	691	29.6	1 640
Total sanitation	3 181	1 159	36.4	2 021	3 683	1 738	47.2	1 945
Europe								
Urban water supply	..	..	..	..	545	542	99.5	2
Rural water supply	..	..	..	..	184	161	87.3	23
Total water supply	..	..	..	..	729	703	96.5	26
Urban sanitation	..	..	..	..	545	537	98.5	8
Rural sanitation	..	..	..	..	184	137	74.3	47
Total sanitation	..	..	..	..	729	673	92.4	56
Latin America and the Caribbean								
Urban water supply	313	283	90.4	30	391	353	90.3	38
Rural water supply	128	72	56.4	56	128	74	57.6	54
Total water supply	440	355	80.6	86	519	427	82.2	92
Urban sanitation	313	247	78.9	66	391	335	85.7	56
Rural sanitation	128	39	30.7	89	128	56	43.5	72
Total sanitation	440	286	64.9	155	519	391	75.3	128
Northern America								
Urban water supply	..	..	..	..	239	239	100.0	0
Rural water supply	..	..	..	..	71	71	99.9	0
Total water supply	..	..	..	..	310	310	100.0	0
Urban sanitation	..	..	..	..	239	239	100.0	0
Rural sanitation	..	..	..	..	71	71	99.9	0
Total sanitation	..	..	..	..	310	310	100.0	0

Region/sector	1990 Population	1990 Number served	1990 Percentage coverage	1990 Number unserved	2000 Population	2000 Number served	2000 Percentage coverage	2000 Number unserved
Oceania								
Urban water supply	..	..	..	..	21	21	98.5	0
Rural water supply	..	..	..	..	9	9	95.4	0
Total water supply	..	..	..	..	30	30	97.6	1
Urban sanitation	..	..	..	..	21	20	96.0	1
Rural sanitation	..	..	..	..	9	8	91.3	1
Total sanitation	..	..	..	..	30	29	94.6	2
World								
Urban water supply	..	..	..	..	2 845	2 662	93.6	183
Rural water supply	..	..	..	..	3 210	2 270	70.7	940
Total water supply	..	..	..	..	6 055	4 932	81.5	1 123
Urban sanitation	..	..	..	..	2 845	2 427	85.3	418
Rural sanitation	..	..	..	..	3 210	1 172	36.5	2 038
Total sanitation	..	..	..	..	6 055	3 599	59.4	2 456

Source: based on data obtained by the Division for Sustainable Development of the United Nations Secretariat.

Note: Two dots (..) indicate a lack of comparable data; totals may differ from the sum of other columns because of rounding.

3. Data analysis

12. Returns were received from a total of 150 countries. The reported figures were accepted unless the existing data from previous household surveys gave reasonable grounds to suspect that they might be inaccurate. In that case, a query was sent back to the country through WHO, pointing out the difference between the reported figures and the survey data and requesting clarification or correction of the difference. Where the problem was not resolved, the survey data were used judiciously, having regard to the time elapsed since the survey, the categories under which the results were reported, the sample size and so on. This necessarily compromises the validity of the sample data. Particular care was taken with larger countries, where conditions have a disproportionate effect on global and regional averages. In particular, the 40 most populous countries account for some 90 per cent of the total global population, and these were the subject of special attention.

13. In view of the change in methodology between the present and previous assessments, only a partial comparison of the present results with those obtained in previous years was possible (see table 1). However, in an effort to assess any trends with time, coverage figures were estimated for some countries for 1990 as well as 2000. Since the questionnaire did not request figures for 1990, these estimates are entirely based on survey data, and were made only for those countries where such data exist with sufficient consistency and over a sufficient period of time for a trend to be discerned. However, this occurred in countries totalling well over two thirds of the world population, so that it is still possible to make meaningful though cautious statements about global trends during the decade of the 1990s. Coverage data during this period for Africa, Asia, and Latin America and the Caribbean were deemed to be sufficiently reliable as indicators of general trends in these regions.

14. A substantial degree of uncertainty remains in many countries, and there is still a need to further refine and develop the monitoring process. If the monitoring of access to water supply and sanitation is weak at the national level, it is generally much weaker, though more urgently needed, at the local level. Only when reliable coverage figures are available for individual regions, cities and districts will it be possible for the monitoring process to contribute significantly to national planning.

B. Service coverage in numbers

15. Current estimates confirm the concerns expressed in previous reports. At the start of 2000, at least 1.1 billion people still lack access to water supply and almost 2.5 billion to sanitation. The raw data upon which the present report is based is presented in table 1. The 1990 sampling data for Europe was insufficient and data for 2000 shown in the table are likely to underestimate substantially the number of people lacking access to water supply and sanitation, particularly in the economies in transition of Central and Eastern Europe due to a lack of sufficient data. In fact, a report prepared for the Water Supply and Sanitation Collaborative Council in 1995 estimated that some 38 million people of Central and Eastern Europe lacked access to water supply.[2] Similarly, differences in sampling between 1990 and 2000 for Oceania did not permit a sufficiently reliable analysis of trend for that area. Although no 1990 estimates are reported for the two countries of Northern America in table 1, it can be assumed that, as in 2000, practically universal coverage already existed in 1990.

16. Table 2 summarizes the revised estimates for water supply and sanitation service coverage for the comparable regions of Africa, Asia,[3] Latin America and the Caribbean between 1990 and 2000. For these regions, which are critical in terms of poverty and development, progress towards full coverage is slow everywhere. Even if the rate of progress could be maintained, full coverage for drinking water cannot reasonably be anticipated before 2050 in Africa, 2025 in Asia and 2040 in Latin America and the Caribbean. Progress is relatively slight for countries and categories with high coverage (for example, urban water and sanitation in Africa and Latin America and the Caribbean). Access to sanitation is usually much better in the urban context and it is evident that a very special effort will be required in Asia, where there is only 30 per cent rural coverage, and in rural Africa, where coverage declined over the decade. Overall, for the three regions, which comprise 82.5 per cent of the world's population and the great majority of developing countries, coverage has increased by less than 6 per cent for water supply and less than 10 per cent for sanitation.

1. Global and regional water supply

17. Although the figures concerning the number of people still lacking access to water supply remain sobering, some progress has been achieved in the last decade. According to the new methodology, approximately 4.9 billion people worldwide, representing about 81 per cent of the total population, currently have access to water supply (see table 1).

18. Regionally, progress with regard to water supply is reported for Asia, where coverage increased from approximately 75 per cent of the total population in 1990 to 81 per cent by 2000. Currently, nearly 3 billion people have access to water supply. The addition of some 607 million people to the ranks of those provided with access to water resulted in a decrease of 105 million in those lacking such access, currently totalling 695 million. Progress was evident throughout the various subregions (Eastern Asia, South-Central Asia, South-Eastern Asia and Western Asia), but most notably in the South-Central region. In terms of percentage of the total population, access to water supply remains lower in Eastern and South-Eastern Asia than in the other subregions.[4]

19. By contrast, the total population in Africa without access to water increased by some 15 million, even though services were provided to an additional 154 million and coverage increased from 52 to 61 per cent of the population. Currently, 476 million people have access to water supply, but some 309 million people still lack access to water supplies in the region. Progress in Northern and Western Africa, leading to a decrease in the number of people lacking access to water supply, was offset by increases elsewhere in East Africa, Middle Africa and Southern Africa. In relative terms, access to water supply is considerably higher for Northern and Southern Africa (about 85 per cent) than in Eastern, Middle and Western Africa, where coverage ranges between about 45 and about 55 per cent.

Table 2

Progress achieved in terms of rates of change of coverage in the three comparable regions during the period 1990-2000

	Water supply			*Sanitation*		
	1990	*2000*		*1990*	*2000*	
Region	*(percentage)*		*Change*	*(percentage)*		*Change*
Africa						
Urban	85.0	85.1	+0.1	83.1	83.8	+0.7
Rural	36.8	45.7	+8.9	44.4	43.0	-1.4
Total	**52.3**	**60.7**	**+8.4**	**56.8**	**58.5**	**+1.7**
Asia						
Urban	94.3	92.7	-1.6	65.9	77.5	+11.6
Rural	65.5	74.4	+8.9	22.4	29.6	+7.2
Total	**74.8**	**81.1**	**+6.3**	**36.4**	**47.2**	**+10.8**
Latin America and Caribbean						
Urban	90.4	90.3	-0.1	78.9	85.7	+6.8
Rural	56.4	57.6	+1.2	30.7	43.5	+12.8
Total	**80.6**	**82.2**	**+1.7**	**64.9**	**75.3**	**+10.4**
Total for three regions						
Urban	92.4	91.2	-1.2	70.8	80.0	+9.2
Rural	60.7	68.9	+8.2	26.1	32.5	+6.4
Grand total	**72.1**	**78.0**	**+5.9**	**42.4**	**51.9**	**+9.5**

Source: same as table 1.

20. In Latin America and the Caribbean, coverage barely increased, from about 81 to 82 per cent of the total population. Nearly 427 million people currently have access to water supply. Even though an additional 72 million people gained access to water, the number of inhabitants lacking access to services increased by 6.6 million to a total of 92 million people. The available data suggests that significant progress took place during the 1990s in the Caribbean region as a whole, where the number of people without access to water supply may have actually decreased. Such progress, however, was offset by increases in the number of people lacking access to water supply in both Central and South America, where relative coverage remained essentially unchanged. Still, in percentage terms, coverage in the Caribbean remains lower than in Central and South America.

21. In the case of the developing countries of Africa, Asia, and Latin America and the Caribbean as a group, coverage has increased by about 6 per cent of the population (see table 2): almost 3.9 billion people have access to water supply in these regions. But even though an additional 835 million people have gained access to water and the number of people lacking such access may have decreased by as much as 80 million people since 1990, the number of individuals lacking access to water supply in these regions is still estimated to be over 1 billion.

2. Global and regional sanitation

22. The global picture concerning access to sanitation remains cause for concern, although 3.6 billion people, representing 59 per cent of the total population, currently have access to sanitation. On the basis of comparable data (excluding Europe, Northern America and Oceania), almost 800 million people gained access to sanitation facilities during the 1990s, and although the number of people lacking such access in comparable regions has decreased by 40 million, it is still very high, at almost 2.4 billion.

23. Coverage in Asia increased from about 36 to 47 per cent of the total population: some 1.7 billion people in the region have access to sanitation. The addition of about 578 million people to those having access to sanitation resulted in a decrease by some 77 million to the number of those lacking access to facilities, currently totalling 1.9 billion. Progress in decreasing the number of people lacking access to sanitation is evident in all subregions with the possible exception of South-Central and Western Asia, where relative coverage is the highest, at about 84 per cent. In all the other subregions, relative coverage still remains low, ranging between 38 and 71 per cent of total population.

24. In Latin America and the Caribbean, coverage increased from about 65 per cent in 1990 to 75 per cent by the start of 2000. A total of 390 million people have access to sanitation. Some 105 million people gained access to sanitation and the number of people without access decreased by some 26 million. Overall, 128 million people in the region still lack access to sanitation. The data suggests that decreases in the number of people lacking access to sanitation took place in all three subregions.

25. In Africa, coverage increased only slightly, from about 57 to 58 per cent of total population. Currently, 459 million people have access to sanitation. Although an additional 110 million people gained access to services, the number of unserved increased by an additional 60 million to reach a total of 326 million. Only in Northern and Southern Africa, where the percentage of people with access to sanitation stands at about 81 per cent, did the number of people lacking access decrease. Elsewhere in the region, the number of unserved continued to increase and relative coverage remained low, ranging between 37 and 53 per cent.

3. Urban scenario

26. As table 1 shows, although 93 per cent of the world's urban population is covered by safe water supply and 85 per cent by sanitation facilities, in urban areas worldwide 183 million people still lack access to water supply and 418 million to sanitation.

Urban water supply

27. Given the high rates of urban population growth, increases in urban water supply coverage, significant as they were, were insufficient to prevent an increase in the number of urban dwellers lacking access to water supplies. About 2.7 billion people in urban areas, nearly 94 per cent of the world's urban population, have access to water supply. On the basis of comparable data (excluding Europe, Northern America and Oceania), some 438 million people gained access to water supply during the 1990s. However, the number of urban dwellers lacking access to water supply in the comparable regions also increased by nearly 62 million during the same period.

28. In Africa, the percentage of the population with access to safe water remained at 85 per cent. Nearly 253 million urban dwellers in the region currently have access to water supply. Even though some 85 million people gained access to services, the number of urban dwellers without access to water supply increased by 15 million to a total of 44 million. The data suggest that none of the subregions succeeded in keeping pace with urban population growth. The stress in providing services appears to have been less in Northern Africa and most serious in Eastern and Western Africa.

29. In Asia, the level of coverage may have decreased slightly, from 94 to 93 per cent of the total urban population: 1.3 billion people have access to water supply and an additional 283 million people gained access to services. Nevertheless, the number of people without services increased by some 39 million, and 98 million urban dwellers still lack such access. A decrease by some 5 million people in the number of urban dwellers without access to water supply is reported for Western Asia, where an increase in service by some 42 million took place. Elsewhere, increases in service coverage were insufficient to cope with population growth, particularly in Eastern Asia.

30. In Latin America and the Caribbean, coverage remained essentially static, at 90 per cent of the total urban population. Nearly 353 million urban dwellers have access to water supply. Even though an additional 70 million people gained access to services, the ranks of those lacking facilities increased by nearly 8 million. The number of people without access amount to 38 million. Successes in the Caribbean and Central American subregions in decreasing the number of people lacking access to water supply, particularly in the former, were offset by increases in South America.

Urban sanitation

31. Progress in the provision of urban sanitation was more encouraging. Nevertheless, relative coverage still remains considerably below coverage for urban water supply: 2.4 billion people, 85 per cent of the total urban population, have access to sanitation facilities. On the basis of comparable data (excluding Europe, Northern America and Oceania), 542 million people gained access to urban sanitation facilities during the 1990s, while the number of people lacking such access in the comparable regions decreased by about 41 million. Decreases in the number of urban inhabitants without access to sanitation was the result of progress achieved in the Asian and the Latin American and Caribbean regions.

32. Relative coverage in Asia increased from 66 to 77 per cent between 1990 and 2000. Approximately one billion urban dwellers have access to sanitation, an increase of approximately 369 million since 1990. The number of people without access to services decreased by some 46 million, to a total of 305 million, due to decreases in Eastern, South-Central and South-Eastern Asia.

33. In Latin America and the Caribbean, urban sanitation coverage increased from about 79 per cent in 1990 to 86 per cent in 2000: some 335 million urban dwellers have access to sanitation. As a result of an increase of 88 million since 1990 in the number of urban dwellers with access to sanitation, the number of inhabitants who lack access to sanitation services decreased by 10 million to a total of nearly 56 million. Progress in decreasing the number of unserved was evident in all three subregions.

34. In Africa, urban sanitation coverage has increased slightly, from about 83 per cent to nearly 84 per cent in 2000. Currently, some 249 million urban dwellers have access to sanitation. The provision of sanitation facilities to some 85 million urban dwellers in Africa since 1990 was insufficient to prevent an increase of nearly 15 million in the number of people lacking access to services: 48 million urban dwellers lack sanitation. The data suggests that Eastern, Middle and Western Africa are particularly vulnerable to stresses due to urban population growth.

4. Rural scenario

35. As table 1 shows, only 70 per cent of the world's rural population is covered by safe water supply and barely 37 per cent by sanitation facilities.

Rural water supply

36. Globally, some progress has taken place between 1990 and 2000 with regard to rural water supply. In total, nearly 2.3 billion people in rural areas currently have access to water supply, representing 71 per cent of the world's rural population (see table 1). On the basis of comparable data (excluding Europe, North America and Oceania), almost 400 million rural dwellers gained access to water supply during the 1990s, whereas the number of rural dwellers lacking access to water supplies decreased by some 150 million to a total of

915 million in 2000. Decreases in the number of people lacking access to water supply in rural areas have been due mostly to the significant progress achieved in Asia and to a lesser extent in Latin America and the Caribbean.

37. In Asia, relative coverage significantly increased from about 65 per cent of the rural population in 1990 to 74 per cent at the start of 2000: 1.7 billion people in rural Asia currently have access to water supply. As an additional 324 million people benefited from access to water, the actual number of rural dwellers lacking access to water is reported to have decreased by some 145 million to a total of 597 million. Such decreases took place throughout all subregions, with the apparent exception of Western Asia. They were particularly significant in Eastern and South-Central Asia.

38. In Latin America and the Caribbean, relative coverage increased slightly from 56 to 58 per cent during the last decade, totalling 74 million. In the face of a virtually unchanged rural population, an additional 1.7 million people received access to water and the total number of dwellers lacking access to water services decreased by 1.3 million to a total of 54 million. Only in Central America did the number of rural dwellers lacking access to water supply increase.

39. The African region has witnessed a significant increase in the provision of water supply to rural areas. Coverage has increased from 37 per cent in 1990 to 46 percent by the start of 2000: 223 million rural inhabitants have access to water. In spite of an increase by 69 million people gaining access to water supply, the total number of rural inhabitants without access to water increased marginally (by about half a million) to a total of 264 million. In percentage terms, rural water supply coverage remains low, in the range of 29 to 46 per cent in Eastern, Middle and Western Africa.

Rural sanitation

40. The percentage of the world's rural population with access to sanitation remains alarmingly low — 37 per cent at the start of 2000. Approximately 1.2 billion people currently have access to sanitation in rural areas, while some 2 billion people are reported to lack such access. On the basis of comparable data (excluding Europe, Northern America and Oceania), 252 million people gained access to sanitation facilities during the 1990s, while the number of people lacking such access in comparable regions decreased by about 1 million. While some progress has been achieved both in Asia and in Latin America and the Caribbean, in Africa there has been a decrease in the rate of coverage.

41. In the Asian region, coverage has increased from 22 per cent in 1990 to nearly 30 percent of the rural population in 2000; 691 million people in rural areas have access to sanitation. As a result of an increase of some 210 million who gained access to facilities during the 1990s, the number of people lacking access has decreased by some 30 million to a total of 1.6 billion people. Decreases in the number of people without access to sanitation took place in all subregions with the exception of Western Asia, though they are reported to have been more significant for Eastern and South-Central Asia.

42. In Latin America and the Caribbean, with a virtually static rural population, coverage increased from 31 to 44 per cent of the rural population between 1990 and 2000. A total of 56 million people in rural areas currently have access to sanitation facilities. Since approximately 17 million people received access to sanitation facilities, the reported number of people lacking sanitation decreased by nearly the same amount to an estimated 72 million people. Decreases in the number of rural inhabitants without access to sanitation were evident in each of the three subregions.

43. In the African region, relative coverage decreased slightly, from 44 to 43 per cent to a total of 210 million people in 2000. Although the number of rural dwellers having access to sanitation increased by nearly 25 million, the number of those lacking such access also increased by 45 million. Currently 278 million people do not have access to sanitation facilities. Decreases in Northern and Southern Africa in the number of people devoid of access to sanitation were offset by increases elsewhere in the region.

5. Water supply, environmental sanitation and displaced people due to civil strife and natural disasters

44. In addition to the above estimates of urban and rural dwellers who still lack access to safe water and sanitation, their ranks are swelled by displaced persons due to civil strife and natural disasters, such as floods and droughts. The severity of natural disasters and the frequent institutional weakness and absence of effective disaster prevention and mitigation policies

results every year in thousands of people facing severe shortages of water and sanitation facilities, which must be provided on an emergency basis. Civil strife also results in massive amounts of refugees, for whom shelter must be provided in camps with makeshift water supply and sanitation facilities. In 1998, for instance, the Office of the United Nations High Commissioner for Refugees (UNHCR) addressed the needs of 11.5 million refugees worldwide and some 5 million internally displaced people.

C. Reliability of services and water quality

45. The seriousness of the situation described above is compounded by the lack of reliability of water supply delivery systems. The rapid rates of urbanization in developing countries are severely straining already inadequate networks. Frequently, water is delivered only a few hours a day or even a few days a week. A survey conducted by the Asian Development Bank is illustrative of the problem. Of the 50 utilities studied, serving some 206 million people, only 26 utilities, comprising about 41 per cent of the total population surveyed, provided water 24 hours per day. Eleven cities, amounting to 35 per cent of the total population, received water 12 or less hours per day, and eight cities, with 23 per cent of the total population, supplied water between 12 and 18 hours a day. The same survey showed that unaccounted for water losses ranged from 6 to as much as 70 per cent of the total water delivered, frequently exceeding 50 per cent.[5]

46. Lack of investment in management and maintenance and/or a lack of water treatment facilities often results in the production of retail water that is unsuitable for human consumption. The most serious water quality problem in developing countries continues to be the pollution of water with human faeces. Some two million children die every year from diseases related to water and sanitation, many by the ingestion of faecal matter in water used for drinking and cooking. While it is now recognized that the faecal-oral cycle is best broken through an integrated programme emphasizing the promotion of hygiene behavioural change and environmental sanitation, the physical protection of water sources from faecal contamination remains a key issue. Protecting the source does not ensure that the water people drink will be bacteria-free. There are many cases of water which is bacteria-free at the source becoming contaminated during transportation, storage and consumption. Most efforts to reduce or eliminate such water contamination are centred on the provision of effective hygiene education in the community.

47. The pollution of water supplies by chemical contaminants is a more localized problem than that of bacteriologically contaminated water. However, specific contaminants can greatly affect the quality of water in different areas. One of the most serious recent problems is the contamination of domestic water supplies by naturally occurring inorganic arsenic in parts of Southern Asia. Another naturally occurring chemical contaminant is fluoride, which in high concentrations can cause skeletal fluorosis, a very serious debilitating and ultimately fatal disease.

D. Flow of financial resources

48. The doubling of public expenditures in developing countries on health as a percentage of gross national product (GNP) from 1960 to 1995[6] is indicative of increases in public financing to the sector. Nevertheless, the gap between the level of investments needed in order to achieve full water and sanitation coverage and current levels of investment remains large.

49. Current estimates put national expenditures for water supply and sanitation in developing countries at US$ 10-25 billion, most of which are spent on higher-level services in urban centres.[7] In addition, total private investments in water and sanitation infrastructures in developing countries between 1990 and 1997 are estimated at an additional $25 billion, and official development assistance (ODA) for water supply and sanitation was estimated at $2.9 billion in 1996, constituting 6.6 per cent of total development assistance.

50. An estimate presented in connection with the sixth session of the Commission on Sustainable Development in 1998 indicated that an additional $100 billion would be required in order to achieve full coverage over the ensuing 10 years. More recently, the Water Supply and Sanitation Collaborative Council has estimated that annual investment of $11 billion would be required in order to achieve full coverage by 2025 through the use mainly of low-cost technology.[8] These

estimates do not account for the additional investments that would be required for the extension of networks in growing urban conglomerations. They do not include the investment that is essential for the operation and maintenance of existing systems if they are not to be allowed to decay, or for the upgrading of systems in order to improve their reliability. In addition, they do not take into account the investments required for the installation of new water treatment facilities designed to improve the quality of water delivered to the consumer, or investment needed for the extension and maintenance of sewage systems.

51. The level of the external debt in developing countries, reported at 36 per cent of GNP in 1997[9] remains an obstacle to further investments. This is particularly the case for developing countries, where the overall external debt of the countries in this category amounts to 92.3 per cent of GNP.

52. Ideally, once they have achieved financial and administrative autonomy, public or private utilities would not need to rely on grants for capital investments, operation and maintenance. However, as illustrated by the survey of 50 utilities in Asia, most developing countries are currently far from reaching this objective: of the 50 utilities, 10 are 100 per cent dependent on grant financing; only 19 do not require access to grants.[10]

E. Environmental sanitation and health

53. As a result of the rapid urbanization and increasing industrialization in developing countries, the neglect of solid waste and sewage is the cause of major health problems. The comprehensive assessment of the freshwater resources of the world, submitted to the General Assembly at its nineteenth special session, in June 1997, through the Commission on Sustainable Development at its fifth session, reported that in developing countries as much as 90 per cent of waste water is discharged without treatment. The report states that the impairment of water quality near major urban centres is recognized as a major problem, and that in parts of the world, water quality has been so degraded that it is unfit even for industrial purposes (see E/CN.17/1999/9).

54. Cholera, which is spread by contaminated water and food, struck West Africa in 1970, and since then has become endemic in most of the continent. The disease struck Latin America in 1991 and has since spread throughout other regions. The prevalence of dengue fever has grown dramatically in recent years, and has become endemic in more than 100 countries of Africa, the Americas, the Eastern Mediterranean, South East Asia and the Western Pacific. It is estimated that some 2.5 billion people are currently at risk of infection. Malaria is a public health problem and has become endemic in 101 countries and territories, affecting some 2.4 billion people: worldwide prevalence of the disease is estimated to be in the order of 300 to 500 million clinical cases each year. Mortality due to malaria is estimated to be over 1 million deaths each year. The vast majority of deaths occur among young children in Africa, especially in remote rural areas with poor access to health services.

F. Poverty, water supply and sanitation

55. The provision of safe water and adequate sanitation is closely related to the problem of poverty. The World Bank estimates that nearly 1.3 billion people live on the equivalent of $1.5 a day at 1997 prices. Nearly three billion people subsist on $3 per day.[11] In 1999, the United Nations Development Programme (UNDP) *Human Development Report* concluded that in 92 developing countries, human poverty ranges from a low of 2.6 per cent of the population to a high of 65 per cent.[12] Poverty levels exceed 33 per cent of the population in 37 of 92 developing countries and 50 per cent in another 11 countries, all but one located in Africa.

III. Policy trends since the inception of the decade

56. The Mar del Plata Action Plan laid out a basic framework for the implementation of the International Drinking Water Supply and Sanitation Decade. The provisions set out in the Action Plan relied heavily on national Governments to develop, implement programmes and generate the necessary financial resources. They were formulated in an atmosphere of economic optimism which dissipated in the ensuing years as a result of economic stagnation. It became increasingly clear that Governments alone could not achieve the objectives of the Decade. While the role of Governments remained as essential as ever, the nature of its intervention has undergone a considerable

evolution. At the same time, other agents of progress have emerged as being critically important in the development paradigm. The evolution that has taken place is both conceptually and operationally evident in the recommendations contained in the outcome of the Global Consultation on Safe Water and Sanitation for the 1990s, held at New Delhi in 1990; the outcome of the International Conference on Water and the Environment, held at Dublin in 1992; chapter 18 of Agenda 21; the outcome of the Ministerial Conference on Drinking Water and Environmental Sanitation, held at Noordwijk, the Netherlands, in 1994; and the outcome of the expert group meeting on strategic approaches to freshwater management, held at Harare in January 1998. The main elements of this evolution are discussed below.

A. Decentralization of governmental functions and role of the private sector

57. From the outset of the Decade, it became evident that national Governments alone, even with the assistance of international organizations, were unable to provide the necessary expansion of services to a growing population. The role of Governments has, to some extent, tended to shift from the provision of services to the provision of a legislative and regulatory framework aimed at facilitating the provision of services in a stable environment and on an efficient and equitable basis. As stated by the International Conference on Water and the Environment and in chapter 18 of Agenda 21, there has been an increasing recognition of the need to delegate the management of water resources to the lowest appropriate level. As a result, there has been a trend towards a greater autonomy of public utilities, with greater managerial and operational transparency and greater public accountability. Such changes in Governments have also facilitated interventions of the private sector in the generation of financial resources, the provision of services and management ventures.

58. The private sector is becoming an increasingly important actor as part of the management schemes of existing utilities. The potential for increased private intervention in the near future is considerable with regard to the provision of services to more affluent urban areas of developing countries. However, its participation in the extension of service to the poor in urban and rural areas remains more problematical, hinging on pricing and cross-subsidy policies that would enable private utilities to generate a fair return on their investments. Consequently, of the $25 billion invested by the private sector in developing countries, to date Southern Asia has not been the recipient of any private investment and less than $250 million has gone to the African continent.[7]

59. While the nature of governmental intervention is changing from that of a provider of services to the provision of an enabling environment, its importance has not diminished. For autonomous public and private utilities to succeed in the provision of services required by individuals, the existence of a stable regulatory environment is required. There is now a growing understanding as well as an increasing number of policy measures taken by Governments aimed at providing the regulatory framework needed to ensure that utilities provide services in an equitable and efficient manner.

B. Empowerment of local communities

60. Together with the shift in the role of Governments, there has been an increasing recognition of the importance of empowering local communities to act as agents of change. Community organizations in peri-urban and rural areas have been successful in generating the financial resources needed for the extension of services and in acting as providers of services through the operation and management of local utilities. Many schemes have been developed in several developing countries by which peri-urban communities are organized to receive water from urban networks and be put in charge of the local distribution system and method of collecting fees for the water thus distributed. In addition, non-governmental organizations have often provided critical assistance to local community organizations in terms of technical and financial support, in the design and operation and in the provision of small loans for the implementation of programmes.

C. Importance of the gender dimension

61. There has been an increasing recognition of the need to empower women in the process of solving the water supply and sanitation tragedy. Studies in Southern Asia have shown that community water supply and sanitation programmes supported by

UNICEF and involving women have resulted in higher coverage and better maintenance of water and sanitation facilities, better hygiene awareness and lower incidence of water- and sanitation-related diseases. Attention to the specific needs of women with regard to their daily tasks can have significant health and economic impacts, as illustrated by programme adjustments in some Southern Asia and Caribbean countries. The neglect of the sanitation needs of young female students has resulted in a number of cases in their dropping out from school. The exclusion of women from education opportunities and from managerial and administrative functions has often resulted in the installation of facilities that do not suit their requirements or take advantage of their potential as managers and operators.

D. Capacity-building and improvement of operation and maintenance

62. While the need for additional financial resources has always been recognized, increased emphasis is being given to the strengthening of institutions and legislative frameworks in order to create the necessary enabling environment. There has been an increasing awareness of the need to strengthen technical and managerial capacity at all levels of government as well as managers and operators at the local community level. Efforts have been made in order to improve education and training of technical and administrative staff and of the local entrepreneurs in order to enhance their effective participation. Increased recognition is being given to the need for the transfer of appropriate technologies and the use of indigenous technologies.

63. The experience gained in the early stages of the International Drinking Water Supply and Sanitation Decade highlighted the importance of having in place adequate operation and maintenance procedures and the staff to carry out the required tasks. The lack of attention to operation and maintenance in rural areas has often resulted in a situation in which wells become inoperative a few years after they have been put into operation. In many cases, wells were becoming inoperative faster than new ones could be brought on line. In urban areas, inadequate operation and maintenance has been at the root of the unreliability of services and high levels of unaccounted for water losses in the systems.

64. There is now a better understanding of the need for well-trained personnel responsible for operation and maintenance and for the establishment of suitable institutional arrangements, including the involvement of local communities. There is also a growing awareness of the importance of utilizing appropriate technologies the operation and maintenance of which lend themselves to being managed at the proper lowest level.

E. Drive towards an integrated approach to water resources management

65. The 1997 comprehensive assessment of the freshwater resources of the world, as well as similar other assessments, broadly estimate that approximately one third of the world's population live in areas already facing moderate or severe stresses over their water resources due to high consumption levels relative to availability. The comprehensive assessment concludes that unless effective management measures are taken, as much as two thirds of the world's population could be facing these levels of stress by 2025. In the face of increasing competition among various uses, the 1992 International Conference on Water and the Environment (see A/CONF.151/PC/112), as well as chapter 18 of Agenda 21, stressed the need for a holistic management of freshwater as a finite and vulnerable resource, and the integration of sectoral plans and programmes within the framework of national economic and social policy.[13] The 1994 Ministerial Conference on Drinking Water and Environmental Sanitation reiterated the need for an integrated approach. It recommended that Governments undertake a water resources assessment in order to produce an inventory of the current situation and to identify problems and constraints in providing water supply and environmental sanitation services. The Conference also called on Governments to develop, review or revise, in the context of a national sustainable development strategy consistent with Agenda 21, measures for water resources management, including drinking water and environmental sanitation, and to develop, review or revise by 1997 and implement measures aimed at achieving a rational and effective provision and use of drinking water and environmental sanitation. So far, however, as stated in previous reports of the Secretary-General to the Commission on Sustainable Development, progress in

the implementation of chapter 18 of Agenda 21 and of the Water Conferences have been inadequate.

F. Economic and financial dimension of water supply and sanitation

66. Chapter 18 of Agenda 21 states that priority has to be given to the satisfaction of basic needs and the safeguarding of ecosystems. Beyond these requirements, however, water users should be charged appropriately.[14]

67. Experience since the launching of the International Drinking Water Supply and Sanitation Decade has amply demonstrated that the autonomy and viability of utilities, whether public or private, as well as of community organizations hinge on their ability to recover costs via appropriate cost recovery policies. While equity considerations require that concerns over the satisfaction of basic human needs be fully taken into account, the burden of subsidies, when and where needed, cannot rest on the providers of services if their sustainability is to be maintained. To a great extent, cost recovery policies for services delivered to poor urban and rural communities are linked to the establishment and support of organizational structures capable of providing the type of services that the members of the community are willing and able to pay for.

68. Income transfers in the form of subsidies to the poor may be required at times. In other cases, however, the lack of suitable cost recovery policies, coupled with the use of inappropriate technologies, may result in poor consumers in peri-urban and rural areas having to pay needlessly high prices. Members of poor communities are sometimes able and willing to pay for services suitable to their requirements, but if left to their own devices they are likely to pay considerably more for inferior services from local vendors. The available evidence suggests that frequently, the price paid by people in peri-urban areas for water supplied by tankers is 20 to 30 times higher than prices paid by consumers served by house connections.

IV. Outlook for the year 2025

69. The available data clearly suggests that with perhaps a few exceptions, a continuation of the current level of efforts in the provision of services will not yield full service water supply and sanitation coverage in most developing countries in the near future; efforts required to achieve this objective will need to be of a much greater magnitude. Difficulties in achieving full or near full coverage will be compounded by increasing competition for scarce water resources among various industrial, domestic and agricultural uses and by an inevitable rise in the cost of providing water and sanitation services.

A. Daunting urban challenge

70. Urban growth in developing countries will strain their ability to maintain existing infrastructure, let alone their ability to extend services to the growing population. By the year 2025, it is estimated that about 54 per cent of the population in developing countries will reside in urban areas. By the year 2015, 21 cities in developing countries — 15 in Asia, 2 in Africa and 4 in Latin America from a total of 26 worldwide — will have a population of 10 million or more, as compared to 1 city in 1970 and 10 cities in 1995. Another 31 cities will have a population between 5 and 10 million by 2015, as compared to 17 in 1995 and 10 in 1970. In 1970, 71 cities in developing countries had a population between 1 and 5 million people; the number of cities in this category rose to 187 in 1995 and is expected to reach 228 by 2015.[15] Globally, in order to achieve full water supply coverage by 2025 in urban areas services would need to be provided to the additional 1.7 billion people expected to dwell in urban areas as well as to the 184 million currently lacking access to water supply services. In the case of urban sanitation, the 2.16 billion people to be provided with services would be equivalent to 76 per cent of the current urban population.

71. As shown in figure 1, urban annual growth rates between 2000 and 2025 are expected to exceed 4 per cent in the least developed countries and in Eastern and Middle Africa. They are expected to exceed 3 per cent in Western Africa, Melanesia and Micronesia. Lower but still significantly high rates are expected to persist in South-Central and South-Eastern Asia as well as Central America. Urban population is expected to at least double in 39 African countries, 13 of which are located in Eastern Africa, 7 in Middle Africa, 1 in Northern Africa, 3 in Southern Africa and 15 in Western Africa. For Asia, eight countries in South-Central Asia are expected to witness a doubling or

more of their urban population. The same is expected to be the case for four countries in South-Eastern Asia and five countries in Western Asia. Eleven countries in Latin America and the Caribbean and 87 countries worldwide are expected to at least double their urban population in the next 25 years. Clearly, many developing countries and the regions with the highest urban growth will face a difficult situation requiring major efforts by all concerned.

72. The sustainability of urban development is very much in question not only as a result of increased requirements for water supply and sanitation but also and perhaps more significantly by the enormous additional stress on waste water and solid waste treatment facilities, which are already vastly inadequate to cope with existing loads. The continued neglect of the urban waste problem will inevitably have dire consequence with regional and global implications in the not too distant future. To date, the call for urgent action voiced in previous reports of the Secretary-General and major United Nations conferences has remained unheeded.

B. Consequences of neglecting the rural poor

73. In spite of lower rates of population growth in rural areas, the outlook for the provision of water and sanitation to the rural poor remains bleak. Globally, access to water supply would have to be provided to the additional 77 million people stemming from population increase and to the 947 million currently lacking access to rural water supply services. In the case of rural sanitation, the 2.1 billion people that would require services would be equivalent to over 82 per cent of the number of rural dwellers with access to sanitation.

74. The progress achieved in Asia and to a lesser extent the current situation in Latin America and the Caribbean gives reason to hope that significant achievements, if not full coverage, may be achieved within the next 25 years in some countries in these regions. With the exception of Northern Africa, however, the situation in Africa gives little cause for optimism unless it becomes the subject of major efforts by local and national authorities, regional and international organizations and non-governmental organizations.

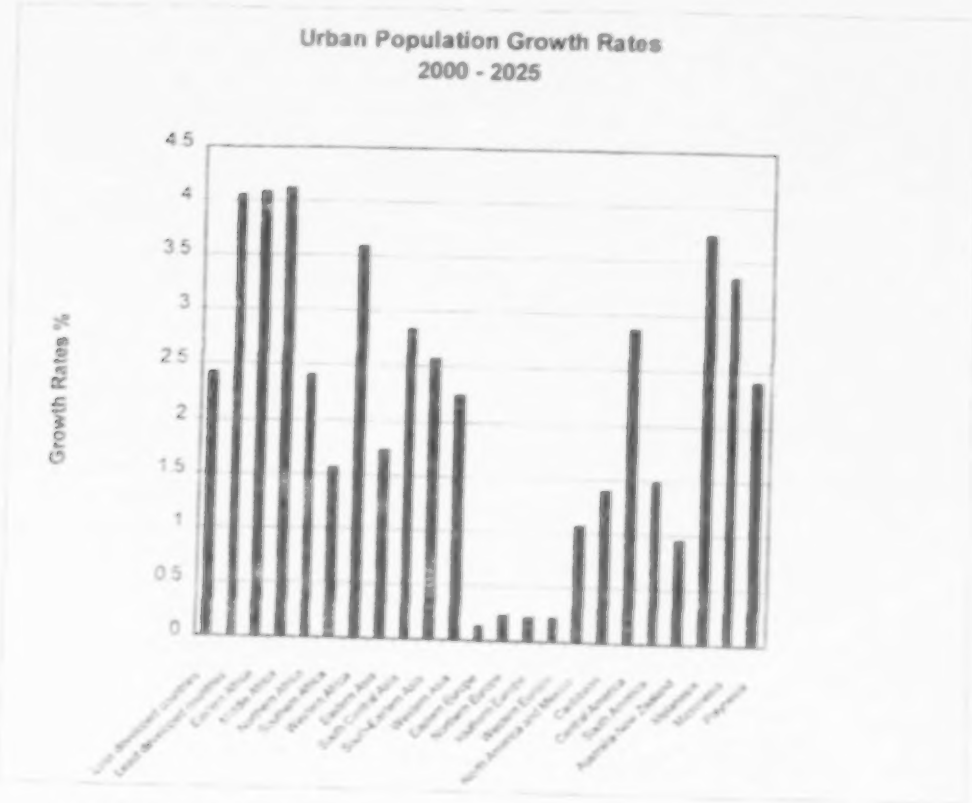
V. Path to full coverage

75. The task of providing basic water and sanitation services to the growing masses of the urban poor is nothing short of daunting. The provision of services to the neglected rural population still remains a formidable challenge which needs to be addressed with the utmost urgency. Any hope of achieving full coverage in the next 25 years can only be envisaged if Governments, the international community, non-governmental organizations and civil society at large fully commit themselves to undertakings of a much larger magnitude than heretofore.

76. Governments are urged to fulfil their commitments expressed in the Copenhagen Declaration on Social Development towards promoting and attaining the highest attainable standards of physical and mental health and access to primary health care, including the developing and updating of country action plans or programmes to ensure universal, non-discriminatory access to basic health services, including sanitation and drinking water.[16] With the support of the international community, they are urged to commit themselves to the adoption and implementation of programmes designed to bring to an end the human misery endured by the millions who are still denied suitable basic water and sanitation services.

77. The sustainability of development in many developing countries is at grave risk as a result of the inadequate control of liquid and solid wastes polluting the environment. There is an urgent need to address the ever-growing problem of solid and liquid waste if an irreversible degradation of the environment and major outbreaks of water-related diseases are to be prevented and if major ecological and health disasters are to be avoided. Increased attention must be given to the management of water resources with a view to preventing the outbreak of vector-borne diseases, which are becoming endemic in many developing countries.

Figure 1.
Urban population growth rates by region, 2000-2025



Source: World Population Prospects: the 1998 Revision (United Nations publication, Sales No. E.99.XIII.8).

78. Action is needed on several fronts, requiring the implementation of recommendations stemming from the United Nations Conference on Environment and Development (UNCED) and subsequent conferences. First of all, Governments, with the support of the international community, as appropriate, need to assess or update their knowledge of their current situation concerning water supply and environmental sanitation in the context of an integrated, holistic approach to water resources development, management and use, and to establish specific targets and programmes, with special emphasis on the needs of the poor.

79. In 1994, the Ministerial Conference on Drinking Water and Environmental Sanitation recommended that Governments undertake a water resources assessment in order to produce an inventory of the current situation and to identify problems and constraints in providing water supply and environmental sanitation services. The Conference also called on Governments to develop, review or revise, in the context of a national sustainable development strategy consistent with Agenda 21, measures for water resources management, including drinking water and environmental sanitation, and to develop, review or revise by 1997 and implement measures for achieving a rational and effective provision and use of drinking water and environmental sanitation.

80. The organizations of the United Nations system active in the sector, both individually and collectively through the ACC Subcommittee on Water Resources, are urged to commit themselves to intensifying their support to developing countries and monitoring

activities, through their regular programme activities and through their technical cooperation and financial support activities. Other multilateral and bilateral organizations are urged to do the same. In addition, a number of other important issues need to be considered in such national programmes, as defined below.

A. Policy commitment

1. Water supply and sanitation as an integral part of poverty alleviation programmes

81. It is imperative that priority attention be given to the provision of water supply and sanitation within efforts by national Governments and the international community towards poverty alleviation. Programmes and projects aimed at the provision of services to the urban and rural poor must be designed and implemented so as to enhance their health standards and income-earning capability. Water and sanitation projects should also become entry points to economic development.

82. Governments are urged to fulfil the commitment undertaken at the World Summit for Social Development to focus their efforts and policies to address the root causes of poverty and to provide for the basic needs of all, including safe drinking water and sanitation.

2. Water supply and sanitation as an integral part of human settlement programmes, particularly with respect to the provision of suitable sanitation facilities to the urban and rural poor

83. Governments need to integrate policies aimed at increasing the provision of water supply and sanitation facilities to the urban and rural poor with human settlement programmes. This is of particular importance in the case of sanitation in view of the very large and increasing gap between those with access to sanitation services and those without.

B. Sustainability and the implementation of services

1. Improved service delivery, operation and maintenance, reliability of services and water quality

84. Efforts by Governments, private and public utilities are needed to improve the quality of the service provided to consumers by increasing the number of households provided with connections rather than through public taps. Improvements in this area will upgrade the nature of services and at the same time decrease the amount of water losses and facilitate the collection of charges, thus increasing revenues. In addition, major efforts are needed to upgrade the reliability of urban services by upgrading existing installations and improving operation and maintenance procedures. Pressures on ageing infrastructures from the massive influx of people to urban areas will constitute a major challenge in the years to come. Although progress has been made with regard to improving operation and maintenance procedures, particularly in rural areas, by empowering local communities to take charge of the operation and maintenance of facilities, much remains to be done.

85. Major efforts are also needed in urban and rural areas alike in order to ensure that the quality of the water delivered is safe for human consumption. In addition to action needed to increase and improve coverage, Governments, public and private utilities need to take measures to ensure that the water delivered is fit for human consumption.

86. There is an urgent need for a major commitment on the part of Governments to address the problems of liquid and solid waste disposal, as well as those associated with water-borne diseases. Governments are urged to address these issues as part of the setting or updating of targets and programmes.

2. Massive infusion of financial resources coupled with effective cost recovery policies

87. The level of financial resources that will be required to reach sustainable full coverage will be substantially larger than current allocations. The bulk of the required additional investments will inevitably have to come from governmental sources, although increased financial support from international organizations and donors — as well as increased

private investments — will also be required. Governments are urged to heed the call by the World Summit for Social Development for 20 per cent of public expenditures to be allocated by developing countries to basic local services, matched by a 20 per cent allocation of aid budgets from donor countries.

88. The formulation and implementation of cost recovery, policies with due attention to the needs of the poor and specific local socio-economic conditions are essential to achieving the sustainability and autonomy of public or private utilities and full and efficient coverage. Increased financing at the required level is unlikely to be forthcoming without the establishment and implementation of effective cost recovery measures at least sufficient to cover operation and maintenance of installations. Without such measures, the financial viability and autonomy of utilities, whether public, private or run by local community organizations, will tend to be in jeopardy.

3. Decentralization and devolution of responsibilities to the lowest appropriate level of management

89. Governments need to continue and intensify efforts to establish the necessary enabling institutional and regulatory environment required to ensure the effective functioning of autonomous public and private utilities and to promote the effective participation of local communities, the private sector and non-governmental organizations. The role of the Government needs to be clearly defined, distinguishing between its functions in the setting and control of standards and regulations on the one hand, and the provision of services on the other. The establishment by Governments of a well defined regulatory environment aimed at defining priorities and providing for the equitable and efficient provision of services is essential to the successful operation of public or private utilities and for management at the lowest appropriate level.

90. Governments, with the support of the international community, need to increase their efforts with regard to the education and training of administrators and technical personnel, including the training of local operators in rural and peri-urban communities. Increased support to local communities will also be required in order to empower them to become full participants in the financing, establishment, operation and maintenance of local water supply and sanitation facilities. Such support will need to take place through education, technical and financial support. Without the fullest participation of people at all levels of society, the goal of full coverage is unlikely to be attained.

91. Partnerships with the private sector may sometimes need to be encouraged within a suitable regulatory and institutional framework that takes into account the needs of the poor. The achievement of full service coverage in the near future will necessitate the active participation of the private sector. Governments need to develop a suitable legal and institutional environment to facilitate active partnerships with the private sector in a manner that ensures the provision of services to the urban and rural poor.

C. Key strategies for enhancing implementation

1. Integration of water supply and sanitation with hygiene education

92. Governments need to strive towards a close integration of education in general and hygiene education in particular, with efforts to overcome the lack of significant progress in the provision of suitable sanitation services. The importance of the role of women as the major element in the household must be reiterated and emphasized.

93. The cost in human life as a result of inadequate water supplies has been well documented throughout the years. It would be erroneous, however, to assume that improved access to water supply will by itself yield significant improvements in human health without achieving major gains in personal hygiene and access to sanitation facilities. Lack of attention to the promotion of hygiene and the provision of sanitation will continue to impede progress in improving human health. Unless linked to improved educational levels in general and hygiene education in particular, water supply and sanitation programmes are unlikely to have their full intended impact on the improvement of health standards. Conversely, improved education leads to increasing the effective demand for services, particularly sanitation.

2. Gender dimension of water supply and environmental sanitation

94. Governments and the international community are urged to give increased emphasis to the formulation and implementation of policies aiming at empowering women as critical actors in the planning, management and operation of water supply and sanitation ventures. Greater attention needs to be given to the requirements of women and the role they play in the household and the community in order to ensure that the provision of water supply and sanitation services plays its full role in the alleviation of poverty.

95. The full integration of women into the planning and implementation process is also an essential requirement in the empowerment of communities. Although some progress has been made in narrowing the gender gap that prevails in prevailing patterns of socio-economic development and in empowering women as full participants in the programming, management, operation and maintenance of water supply and sanitation services, wide disparities still persist in many countries. For example, the female adult literacy rate for all developing countries as reported in the 1999 *Human Development Report* stands at 62.9 per cent for females compared to 80 per cent for males. Real per capita gross domestic product (GDP) for females in developing countries for 1997 is estimated to be half of per capita GDP for the male population. For most countries, both industrialized and developing countries as well as those with economies in transition, the proportion of female administrators and managers is less than 50 per cent, in many cases much less.[17]

3. Improved information management

96. There is an urgent need to establish or improve monitoring systems capable of assessing with a high level of reliability the situation concerning the availability, spatial and temporal distribution of water resources as well as the situation concerning water supply and environmental sanitation. The lack of adequate water resources data, including water supply and sanitation, remains a weak link in efforts to improve the integrated management of water resources, as called for by chapter 18 of Agenda 21 and conferences held since UNCED. For the most part, data on water supply and sanitation coverage and water quality remains uneven and is often unreliable. Governments need to address this issue if significant progress is to be made in the sustainable development, management and use of the resource with explicitly stated priorities for development. As water quality problems become more serious and widespread, water quality monitoring should become a more important component of national sectoral programmes. National information management programmes can be complemented through community-level surveillance systems where people are empowered with the knowledge and tools necessary to monitor water and sanitation problems as well as the quality of their own water sources.

97. The organizations of the United Nations system, through the ACC Subcommittee on Water Resources and in cooperation with other international and regional organizations as well as relevant non-governmental organizations, should strengthen their support to Governments and their own global monitoring capability. Periodic reporting of water supply and sanitation coverage should be published in the envisaged world water development report.

4. Integration of water supply and sanitation within a holistic approach to water resources development, management and utilization

98. It is essential that the formulation and implementation of time-bound targets for the provision of water supply and sanitation for forthcoming years be carried out within the framework of an integrated approach to water resources management. The Commission on Sustainable Development, at its fifth session, underscored the importance of dealing with water supply and sanitation in the context of an integrated approach to water resources management and utilization. Although some progress has been reported towards achieving that objective, the management of water resources in most countries alike remains highly fragmented.

Notes.

[1] *Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977* (United Nations publication, Sales No. E.77.II.A.12), chap. I.

[2] See Albert Schwingshandl, Helmut Weidel and Jutta Mayer, "The situation of the water supply and sanitation sector in the Central and East European countries, the new independent States and Mongolia", report prepared for the Water Supply and Sanitation Collaborative Council (Vienna, November 1995).

[3] Countries belonging to the Western Asia region, which were reported separately in previous reports, are currently included in the Asian region.

[4] Disaggregated data for most of the world's subregions, as defined by the United Nations Population Division (see, for example, *World Population Prospects: The 1996 Revision* (United Nations publication, Sales No. E.99.XIII.9)), can also be generated by the UNICEF/WHO assessment but is not included in table 1.

[5] See Arthur G. McIntosh and Cesar E. Yñiguez, eds., *Second Water Utilities Data Book for the Asia and Pacific Region: Summary of Results for 50 Utilities*, (Asian Development Bank, 1997).

[6] See United Nations Development Programme, *Human Development Report 1999* (New York, Oxford University Press, 1999), table 13.

[7] See Water Supply and Sanitation Collaborative Council, "Vision 21: A Shared Vision for Water Supply, Sanitation and Hygiene and a Framework for Action", document presented at the Second World Water Forum and Ministerial Conference (The Hague, 17-22 March 2000), box entitled "Mobilizing external resources".

[8] See Water Supply and Sanitation Collaborative Council, op. cit.

[9] See United Nations Development Programme, op. cit., table 15.

[10] See McIntosh and Yñiguez, op. cit.

[11] See World Bank, *World Development Report 1998/99* (New York, Oxford University Press, 1999), table 4.

[12] The human poverty index used in the *Human Development Report* brings together in one composite index deprivation in four basic dimensions of human life: a long and healthy life, knowledge, economic provision and social inclusion. For developing countries, deprivation in a long and healthy life is measured by the percentage of people not expected to survive to age 40; deprivation in knowledge by illiteracy; and deprivation in economic provisioning by the percentage of people lacking access to health services and safe water and the percentage of children under five who are moderately or severely underweight.

[13] See Report of the *United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex II, para. 18.6.

[14] Ibid, para. 18.7.

[15] United Nations, *World Population Prospects: The 1996 Revision* (United Nations publication, Sales No. E.98.XIII.5).

[16] See *World Summit for Social Development, Copenhagen, 6-12 March 1995* (United Nations publication, Sales No. E.96.IV.8), chap. I, resolution 1, annex I, sect. C, commitment 6 (m).

[17] United Nations Development Programme, op. cit., table 3.